8500M Intelligent Computer Graphics Terminal:

A new generation in raster graphics display technology.

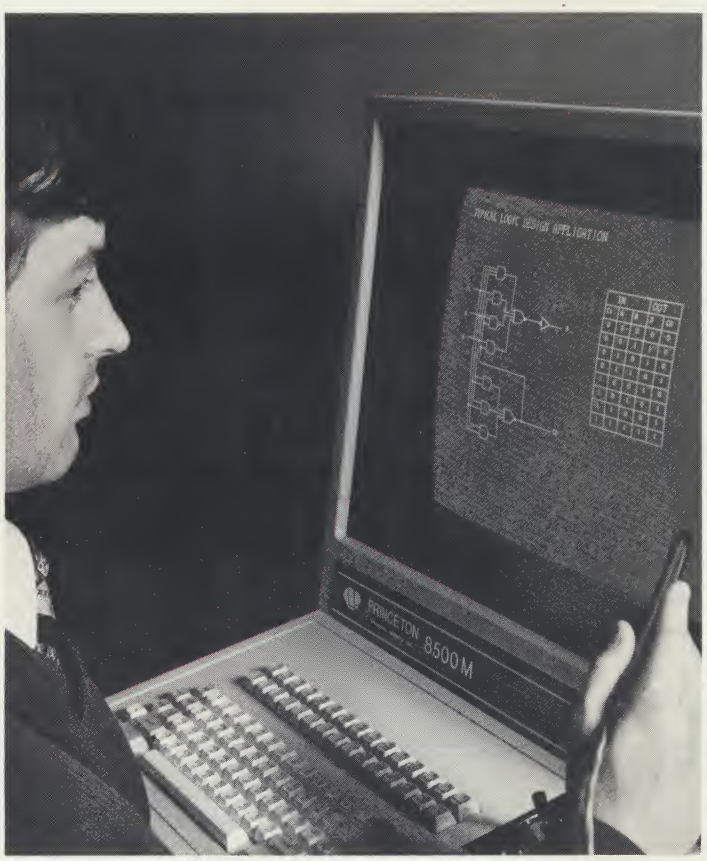
- Now, sophisticated graphics at a price you can afford.
- Unique design results in a combination of features not available in any other graphics terminal.
- The only graphics terminal utilizing the power of beam addressed solid-state image memory.

~1979

The Princeton 8500M: Innovation in raster graphics terminal performance and technology.

The Princeton 8500M microprocessor-based computer graphics terminal offers you an unprecedented combination of features and benefits presently unavailable even in higher priced systems. This combination of features, standard with the 8500M includes:

- Smooth, continuous, high resolution graphics without stair-stepping discontinuities.
- A high resolution 4096 X 3072 viewable window in an 8192 X 8192 addressable field.
- 16X panoramic zoom and preview window for selective magnification.
- Microprocessor minimization of burden on host computer.
- Sophisticated hardware generated graphics capability including: conic generation, textured and shaded vectors, windowing, scaling, 256 selectable character sizes.
- Stroke written alphanumerics, symbols, conics and vectors.
- Expandable RAM for storing user designed characters and symbols.
- Selective erase of graphics and alphanumerics.
- 32 levels of gray scale for graphics and alphanumerics. No undesirable enhancement at vector intersections.



Optional light pen, data tablet, floppy disc, cassette magnetic tapes and hard copy expand the 8500M's capabilities as your needs expand.

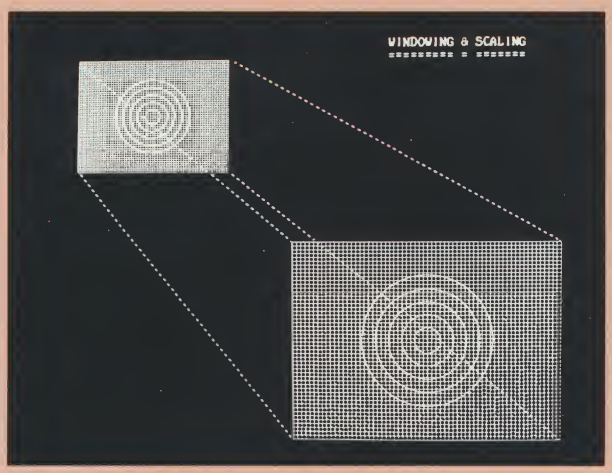
High brightness display; convenient keyboard selection of alphanumerics, graphics and symbols combine to produce extremely easy operation with low operator fatigue.

- Flicker free display of virtually an unlimited number of vectors.
- 360° selectable line writing angle for standard and user designed alphanumerics and symbols.
- High brightness CRT display for easy viewing and long life in high ambient light.
- High resolution TV raster output allowing multiple low cost monitor and/or large screen projection display.
- High resolution TV raster format allowing input video mixing for video/graphics overlays.

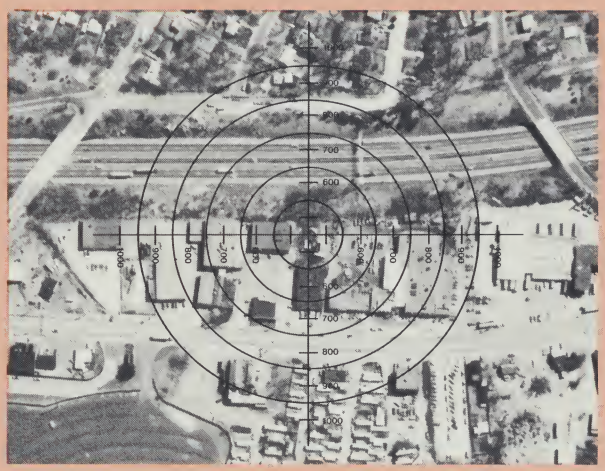
Options which further enhance the 8500M are:

- Floppy Disc
- light pen
- MT Cassette
- digitizer
- hard copy
- APL Keyboard
- additional image memories (for independent multi-plane imaging)
- high speed gray scale interface
- additional character RAM
- 8 or 16 bit parallel interface
- software support packages

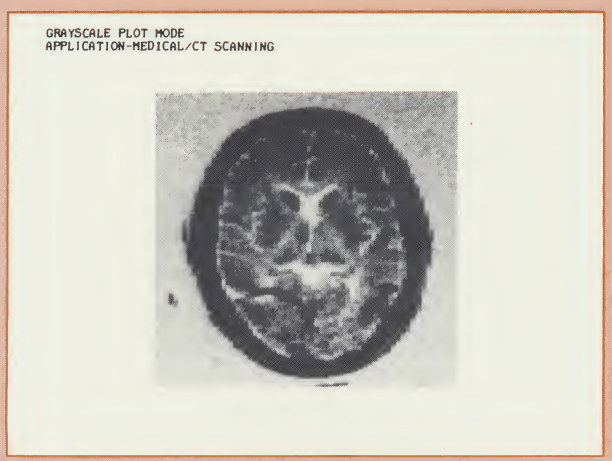
Compare for yourself!



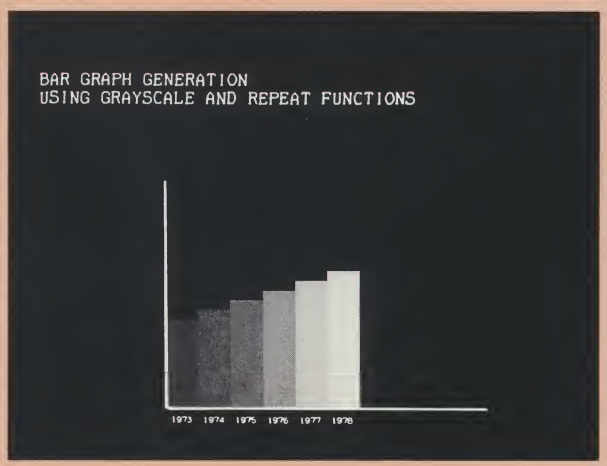
Hardware supported windowing and scaling reduces burden on host computer.



Multiple plane display shows how overlay of reference graphics can be of significant help in mapping or tactical applications.



Applications of the 8500M include computer-aided design and manufacturing, process control, forms design, finite element modeling, seismic modeling, medical research and many others.



Virtually unlimited number of vectors may be displayed without flicker; shaded "3D" solids and 32 levels of gray scale available to give you a new level of design convenience and versatility. True 16X continuous zoom provides exceptional resolution of details.

Consider the advantages of being able to work with all these capabilities:

Draw textured and shaded graphics in any of 32 gray levels with minimum load on host computer. Selectively erase any character, symbol, line or arc without erasing and redrawing the entire display.

Enjoy the benefits of continuous lines and curves without stair-stepping. Overlay a second plane of information from an external video source, or overlay and manipulate planes of graphics. Fill the screen with data and see no flicker.

Create and store special symbols and characters. Select, scale and rotate these as well as the standard ASCII or APL characters. View the screen in high ambient light without eye fatigue. Use the panoramic preview window to select an area of interest. Zoom the selected area, make changes, additions and deletions then return to the original size.

Display your computer graphics to large audiences through multiple TV monitors or TV projection systems.

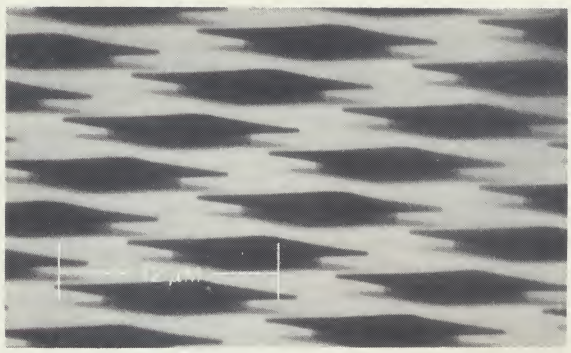
With optional accessories enter data from a digitizer or a light pen or store data on floppy discs or cassette magnetic tapes or output to a hard copy device.

These capabilities are not all that are available with the 8500M. To learn how you can benefit from this advanced new system, return the attached reply card or call today for a demonstration.

The flexibility and cost effectiveness you've needed is here. See it in action — Now! With the Princeton 8500M.

The Princeton 8500M: A unique innovation in display technology. Plus, proven performance.

The Princeton 8500M Intelligent Computer Graphics Terminal utilizing a unique solid-state beam addressed image memory, combined with a powerful internal processing capacity, provides the cost effectiveness of raster graphics combined with virtually all of the operating capabilities of today's most expensive display terminals.



The Lithocon® solid-state beam addressed image memory plane contains over four million microcapacitor elements providing new levels of high resolution performance. Princeton Electronic Products, Inc. pioneered this unique device. (Photomicrograph above, shows a section of microcapacitor memory elements.)

General Specifications.

Graphics

Addressable Matrix . . . . . 8192 x 8192
Visible Matrix . . . . . 4096 x 3072
Drawing Speed . . . . . 5500 in/sec.
Absolute and relative vector addressing
  Long vector format . . . . . Four 8 bit bytes
  Short vector format . . . . . Two 8 bit bytes
Gray Scale . . . . . 32 levels
Texturing . . . . . dot,dash,dot-dash
Point Plot Mode
Plot Scan Mode
Hardware Generated Conics
Full Screen Cursor
Windowing and Scaling
User Designed Symbols

Alphanumerics

Three Hardware text sizes

80 characters/line 34 lines	2720/screen
120 characters/line 51 lines	6120/screen
60 characters/line 26 lines	1560/screen

Programmable Text Size Mode
Writing Speed . . . . . 4000 char/sec.
Writing Method . . . . . Stroke written
Rotation . . . . . 0°-360°
Gray Scale . . . . . 32 levels
Texturing . . . . . Dot, Dash, Dot-Dash
Cursor . . . . . Inverted L, Cursor Blink, Cursor On Off

Basic text editing features
  character replace
  character erase
  line erase

System Performance

Display monitor
20 inch diagonal, 1029 line Raster
60Hz refresh rate with 2:1 interlace
Other line rates available.
Image reversal . . . . . white on black or black on white
Linearity . . . . . 2% picture height
Brightness . . . . . 50 foot lamberts using P4 phosphor (P31 phosphor also available)
Resolution
  130 discernable characters per line
  55 lines 7150/screen
Full screen erase . . . . . 250 milliseconds
Selective Erase
Keyboard
  Code . . . . . Full ASCII (96 printable 32 control)
  Layout . . . . . TTY compatible
Cursor control . . . . . Joystick, Keys
Preview/Zoom

Standard Interface

Serial interface RS-232-C asynchronous customer selectable from 110 to 9600 baud
Communications mode — full and half duplex

Power

Line voltage . . . . . 110/220 VAC, 50/60 Hz
Power . . . . . 640 watt total

Dimensions

Controller cabinet . . . . . 29"H x 31"W x 33"D
Monitor & Keyboard . . . . . 21"H x 21"W x 33"D
Weight — 330 lbs. total

PRINCETON ELECTRONIC PRODUCTS, INC.
P.O. Box 101 North Brunswick, N.J. 08902.
(201) 297-4448. TWX 710-480-3832

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I'm ready, seeing is believing:

- ☐ Please call to arrange a demonstration of the Princeton 8500M Graphics Terminal
- ☐ I need more information. My application is _____.

NAME/TITLE _____

COMPANY _____

ADDRESS _____

CITY/STATE/ZIP _____

PHONE NO. _____

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